

BEAVER CREEK Coal Company

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Mine file (1)
D.W. Hestley (2)



April 16, 1986

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**DIVISION OF
OIL, GAS & MINING**

Mr. Lowell Braxton
Administrator
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: Road Stabilization Plan
Wild Horse Ridge
CEP/015/007
Emery County, Utah

Dear Mr. Braxton:

Enclosed are three copies of the proposed Road Stabilization Plan for the Wild Horse Ridge access road. This plan will provide for long-term stability and environmental protection, while still allowing for occasional access to the site by the landowner.

The area is nearly free of snow at this time. Beaver Creek Coal Company is prepared to implement this plan immediately upon approval.

If you have any questions, or need any further information, please let me know.

Respectfully,

Dan W. Guy
Manager Permitting/Compliance

DWG/rs

cc: Mr. G.E. Vaninetti, Savage Energy Services Corp.
Mr. Jay Marshall, Beaver Creek Coal Company
File 4-P-8-1-1

WILD HORSE RIDGE
ROAD STABILIZATION PLAN

The following is a proposed plan to allow for long-term stabilization and drainage control for the Wild Horse Ridge access road:

CRITERIA:

- (1) The road is to be left in place to allow for occasional access into the property
- (2) All existing culverts larger than 12" in diameter will be left in place;
- (3) The road will be stabilized through the use of vegetation and hydrologic controls;
- (4) Drainage outlets will be protected from erosion by the use of natural rock, energy dissipators, and/or flexible downspouts where necessary.

PROCEDURE:

- (1) Cracks, fractures or other significant rills or gullies in the road surface or downslopes will be repaired, filled in and compacted by the use of a dozer or backhoe;
- (2) Starting at the upper end of the road, the road surface will be regraded as necessary to create a slight (2%+) dip toward the highwall (ditch) side (see Figure 3);
- (3) Ditches will be cleaned and restored along the highwall side of the road (see Figure 3).

- (4) Culverts will be cleaned and catch basins will be installed at the inlet to each culvert (see Figures 1 and 3);
- (5) Water bars will be constructed at each of the cross culverts where the road slope exceeds 5% and at other intervals not to exceed 350' along areas where the road slope exceeds 5% (see Figures 1,2 and 3 for water bar details and Plate 1 for locations);
- (6) Energy dissipators, erosion protection and flexible downspouts will be installed at all road drainage outlets as required to prevent additional erosion.
- (7) The entire road surface will be scarified to a depth of at least 2", using a ripper or similar device;
- (8) The entire road surface will be hydroseeded and mulched, including the ditches, water bars, and at least 10' of the downslope fill material; (see Table 1 for seed mix and rate of application).
- (9) A steel, locked gate will be installed at the point where the road crosses the main channel of Bear Creek to prevent any unauthorized access;
- (10) The drainage control berm at the road junction with the Co-Op Mine access road will be reinstated if necessary.

INSPECTION/RELEASE

- (1) Upon completion of the work, a site inspection will be requested by Beaver Creek Coal Company. It is proposed that the Division of Oil, Gas and Mining coordinate the inspection and invite all involved parties or agencies whose approval is necessary to allow for final release of this road.

- (2) Based upon the inspection, reasonable problems or deficiencies will be corrected, if necessary. The work will be conducted in a professional manner, using standard, accepted practices for earthwork, drainage control and revegetation. It is understood that Beaver Creek Coal Company will be released from the responsibility of this road based upon the performance and approval of the work, not upon its long-term success (i.e. establishment of vegetation)
- (3) Upon approval of the stabilization effort by Beaver Creek Coal Company, it is understood that Beaver Creek Coal Company will be released from any further responsibility for the repair, maintenance or any effects of this road. The road and all gate keys will then be turned back to Nevada Electric Investment Company for their private use.

FIGURE 1

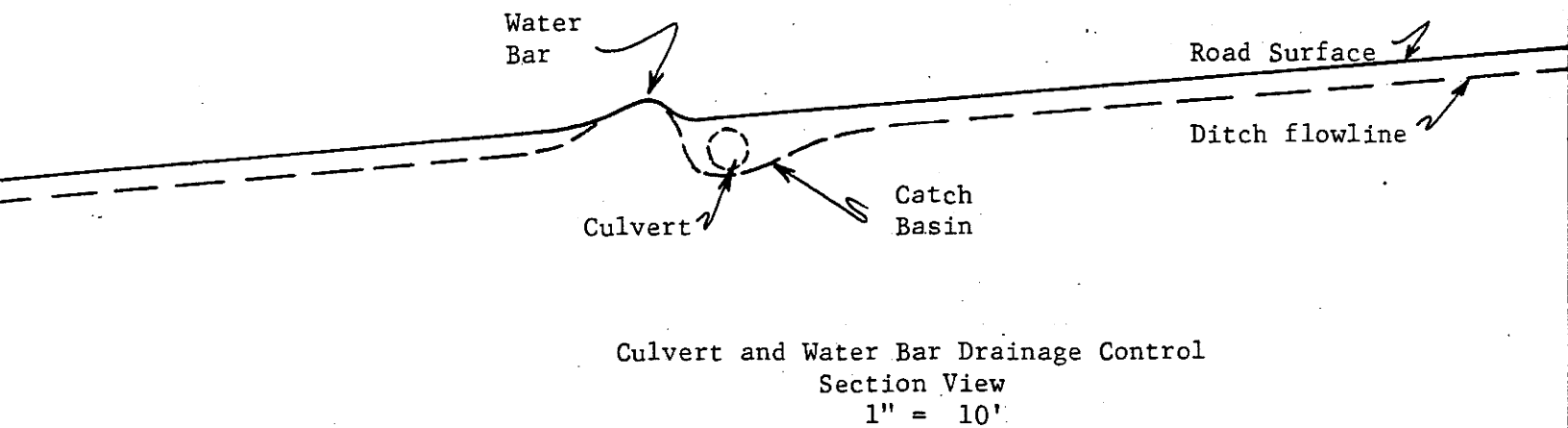
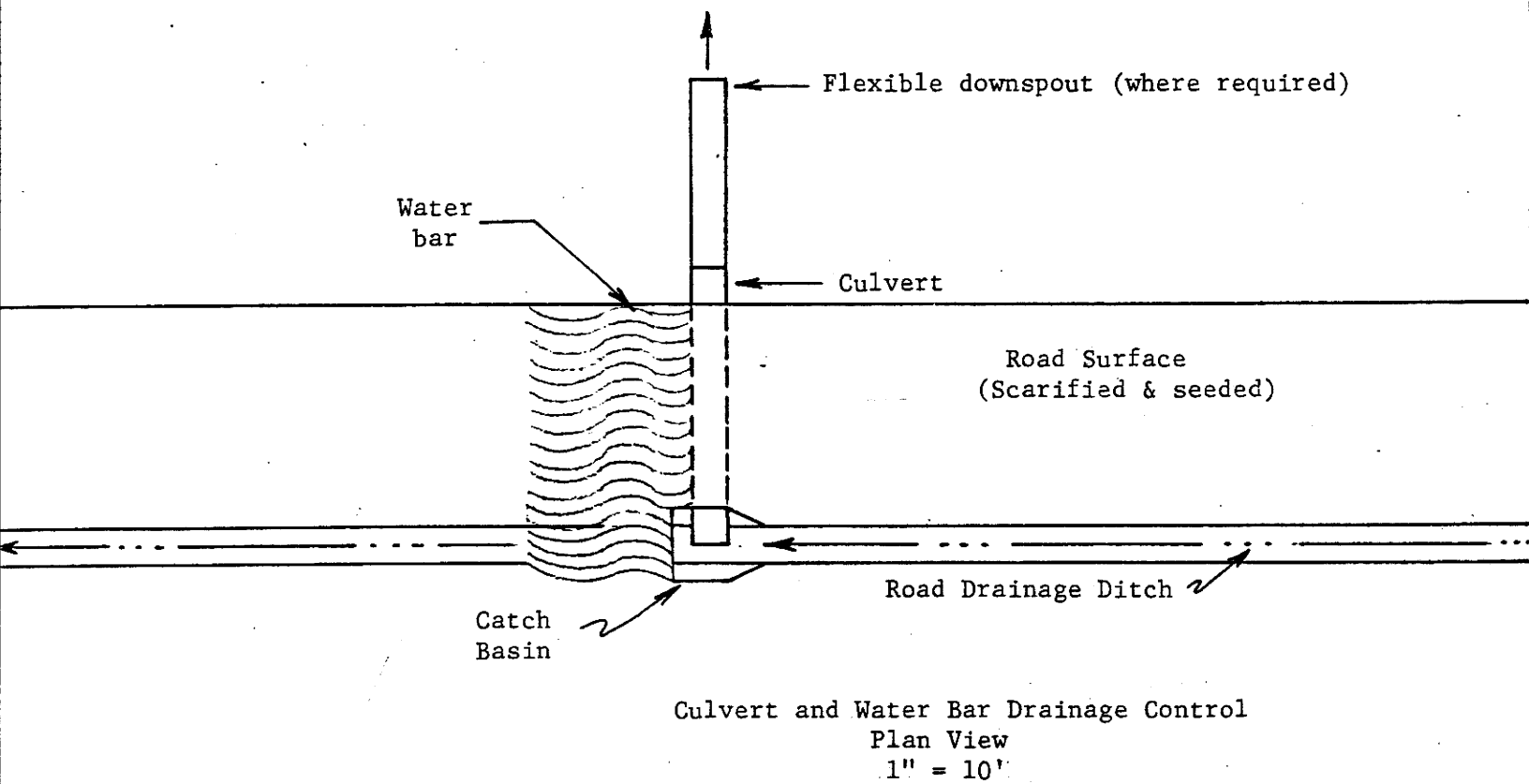
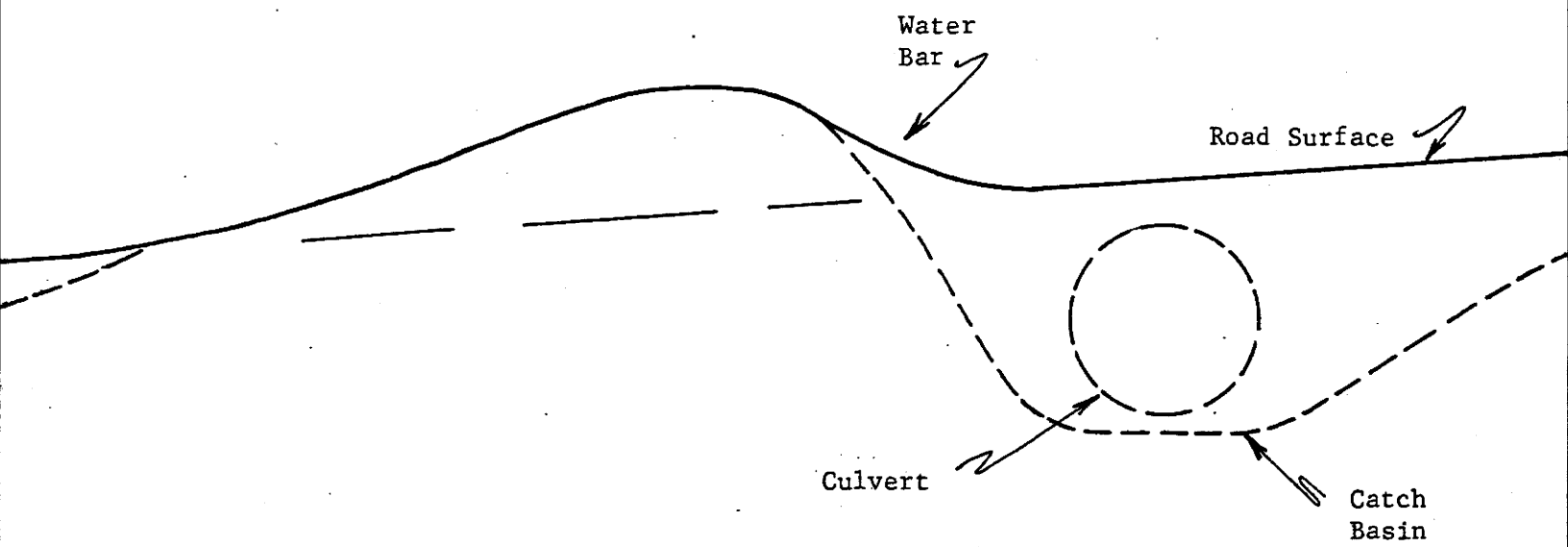


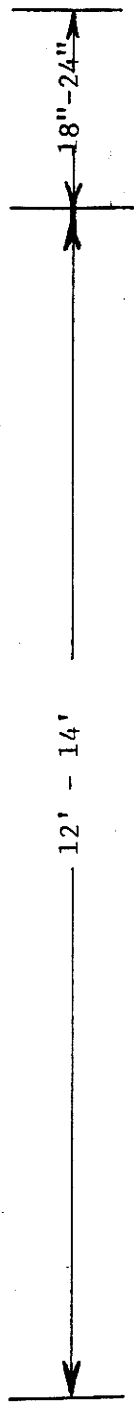
FIGURE 2



Water Bar
Typical Section
1" = 2'

ACCESS ROAD
TYPICAL SECTION
1" = 2'

HIGHWALL



Road Surface

Drainage

Ditch

12"

Top of Water Bar

Road Surface

Drainage

Catch Basin

Outlet

Inlet

Culvert

Access Road
Typical Section at Culvert
1" = 2'

Figure 3

TABLE 1
ROAD STABILIZATION SEED MIXTURE

Species	Hydroseeded Live Seed Lbs/Acre		Seed Numbers/Acre	
	Native	Introduced	Native	Introduced
<u>Agropyron intermedium</u> Intermediate Wheatgrass		2		176,000
<u>Stipa viridula</u> Green Needlegrass	1		181,000	
<u>Oryzopsis hymenoides</u> Indian Ricegrass	3		423,000	
<u>Agropyron dasystachyum</u> Thickspike Wheatgrass	4		616,000	
<u>Agropyron smithii</u> Western Wheatgrass	8		880,000	
<u>Melilotus officinalis</u> Yellow Sweetclover		1		260,000
<u>Poa pratensis</u> Kentucky Bluegrass		1		
<u>Sporobolus cryptandrus</u> Sand Dropseed	$\frac{1}{2}$		1,323,500	
<u>Agropyron spicatum</u> Bluebunch Wheatgrass		$\frac{1}{2}$		87,500
<u>Eragrostis trichodes</u> Sand Lovegrass	$\frac{1}{2}$		650,000	
<u>Borealis Utahensis</u> Utah Sweetvetch	1		60,000	
COLUMN TOTALS	17 $\frac{3}{4}$	4 $\frac{1}{2}$	4,134,500 89%	523,500 11%
GRAND TOTALS	22 $\frac{1}{4}$		107 seeds/ft. ²	